

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :				
Product line	: NEMA Premium Efficiency Three-Phase			
Product code :	14788838			
Catalog # :	00236ET3ER145TC-S			
Frame	: 143/5TC			
Insulation class	: F			
Duty cycle	: Cont.(S1)			
Ambient temperature	: -20°C to +40°C			
Altitude	: 1000 m.a.s.l.			
Protection degree	: IP55			
Design	: B			
Cooling method	: IC411 - TEFC			
Mounting	: W-6			
Rotation <sup>1</sup>	: Both (CW and CCW)			
Starting method	: Direct On Line			
Approx. weight <sup>2</sup>	: 40.4 lb			
Moment of inertia (J)	: 0.1279 sq.ft.lb			
Output [HP]	2			
Poles	2			
Frequency [Hz]	60			
Rated voltage [V]	230/460			
Rated current [A]	4.94/2.47			
L. R. Amperes [A]	48.9/24.5			
LRC [A]	9.9x(Code L)			
No load current [A]	2.13/1.06			
Rated speed [RPM]	3520			
Slip [%]	2.22			
Rated torque [ft.lb]	2.98			
Locked rotor torque [%]	250			
Breakdown torque [%]	300			
Service factor	1.15			
Temperature rise	80 K			
Locked rotor time	23s (cold) 13s (hot)			
Noise level <sup>2</sup>	68.0 dB(A)			
Efficiency (%)	25%	82.1		
	50%	82.5		
	75%	85.5		
	100%	85.5		
Power Factor	25%	0.45		
	50%	0.73		
	75%	0.83		
	100%	0.89		
Bearing type	: <u>Drive end</u> 6205 ZZ <u>Non drive end</u> 6203 ZZ			
Sealing	: V'Ring Without Bearing Seal			
Lubrication interval	: - -			
Lubricant amount	: - -			
Lubricant type	: Mobil Polyrex EM			
Foundation loads	Max. traction : 78 lb			
	Max. compression : 118 lb			
Notes				
USABLE @208V 5.46A SF 1.00 SFA 5.46A				
This revision replaces and cancel the previous one, which must be eliminated. (1) Looking the motor from the shaft end. (2) Measured at 1m and with tolerance of +3dB(A). (3) Approximate weight subject to changes after manufacturing process. (4) At 100% of full load.	These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.			
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		1 / 16	

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage

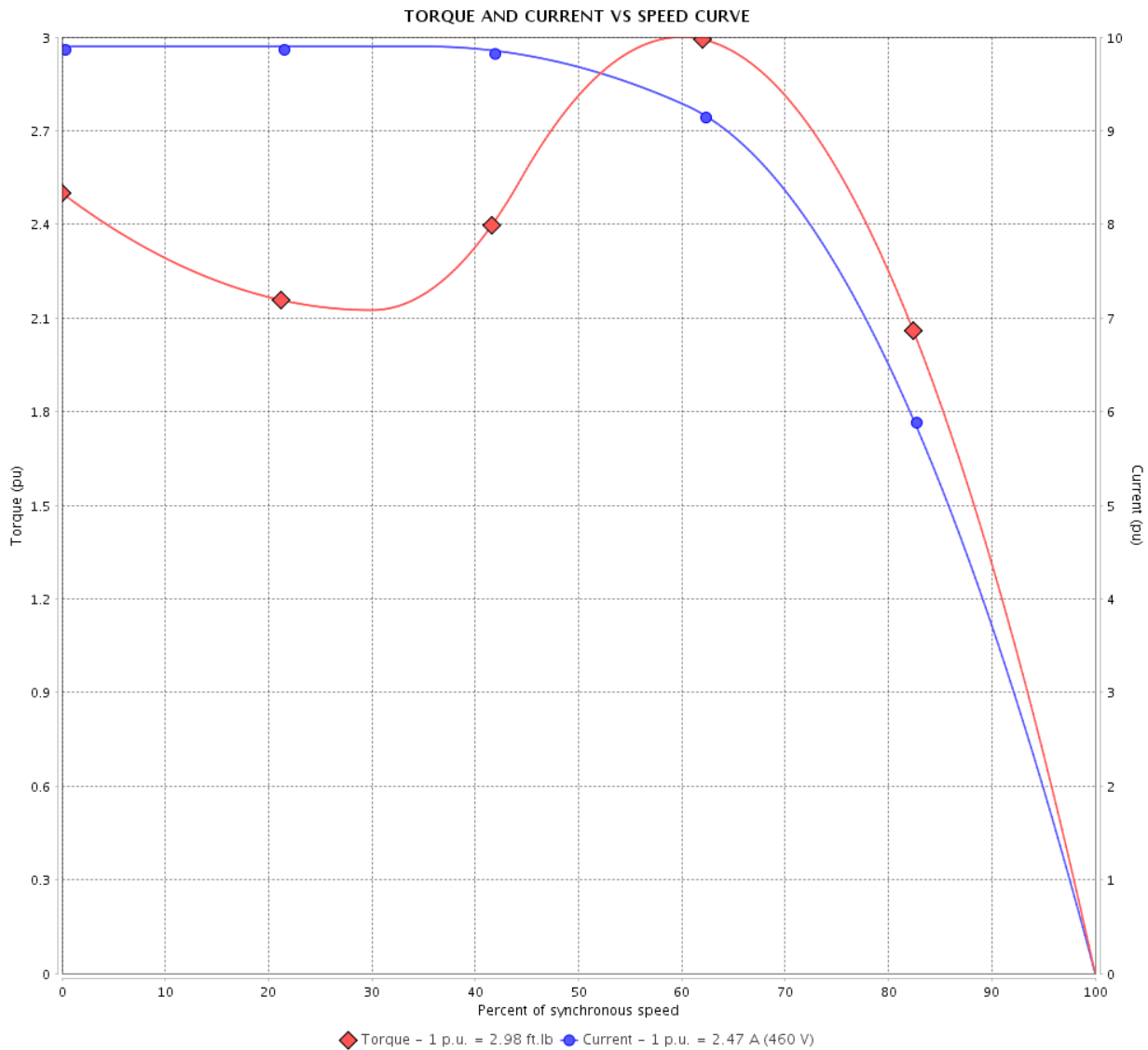


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14788838

Catalog # : 00236ET3ER145TC-S



Performance : 230/460 V 60 Hz 2P

Rated current	: 4.94/2.47 A	Moment of inertia (J)	: 0.1279 sq.ft.lb
LRC	: 9.9	Duty cycle	: Cont.(S1)
Rated torque	: 2.98 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	:
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 3520 rpm	Design	: B

Locked rotor time : 23s (cold) 13s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 2 / 16	Revision
Checked by				
Date	13/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE



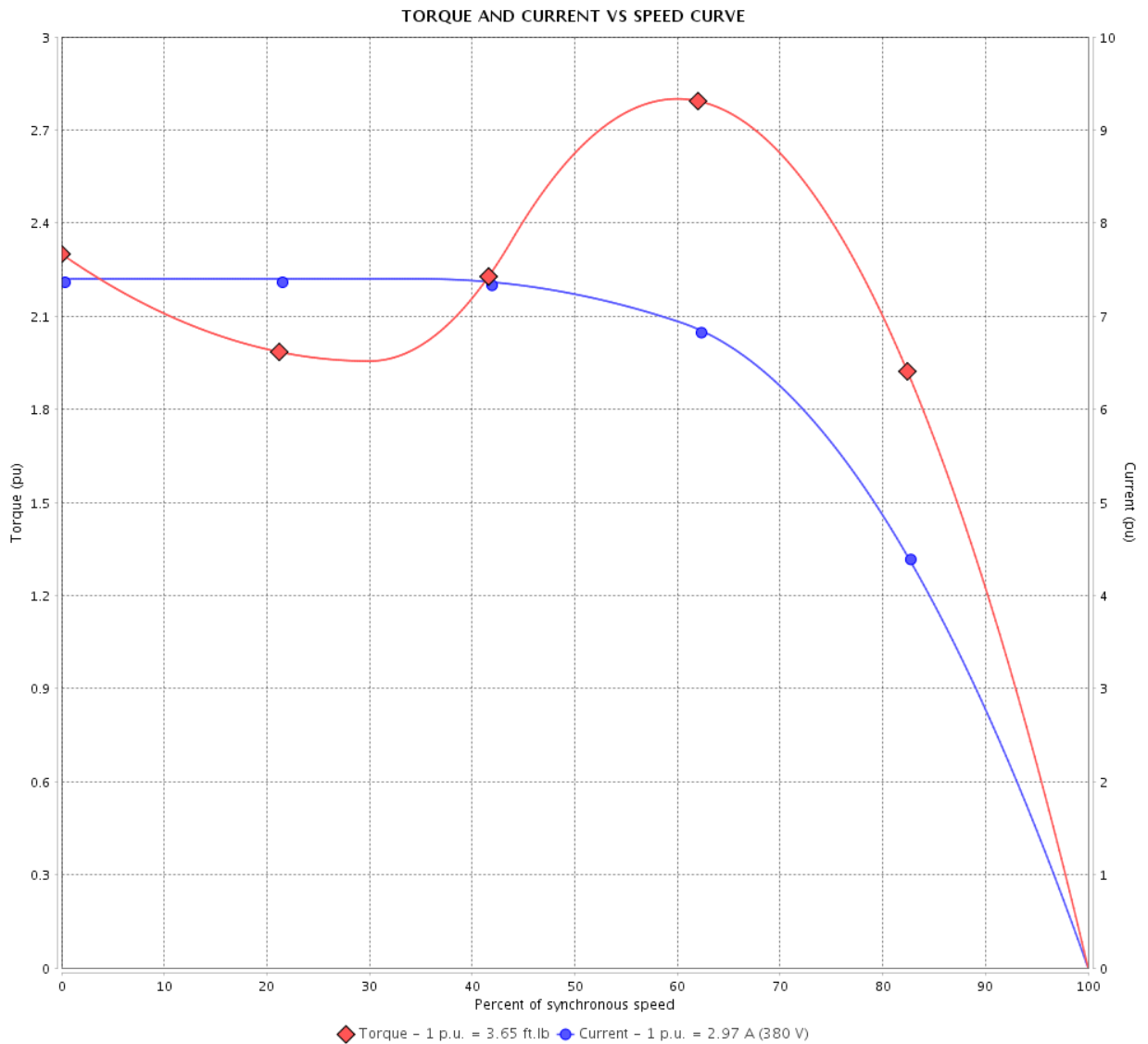
## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14788838

Catalog # : 00236ET3ER145TC-S



Performance : 190/380 V 50 Hz 2P

Rated current : 5.94/2.97 A  
 LRC : 7.4  
 Rated torque : 3.65 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 280 %  
 Rated speed : 2875 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 0s (cold) 0s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 16	Revision
Checked by				
Date	13/04/2022			

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



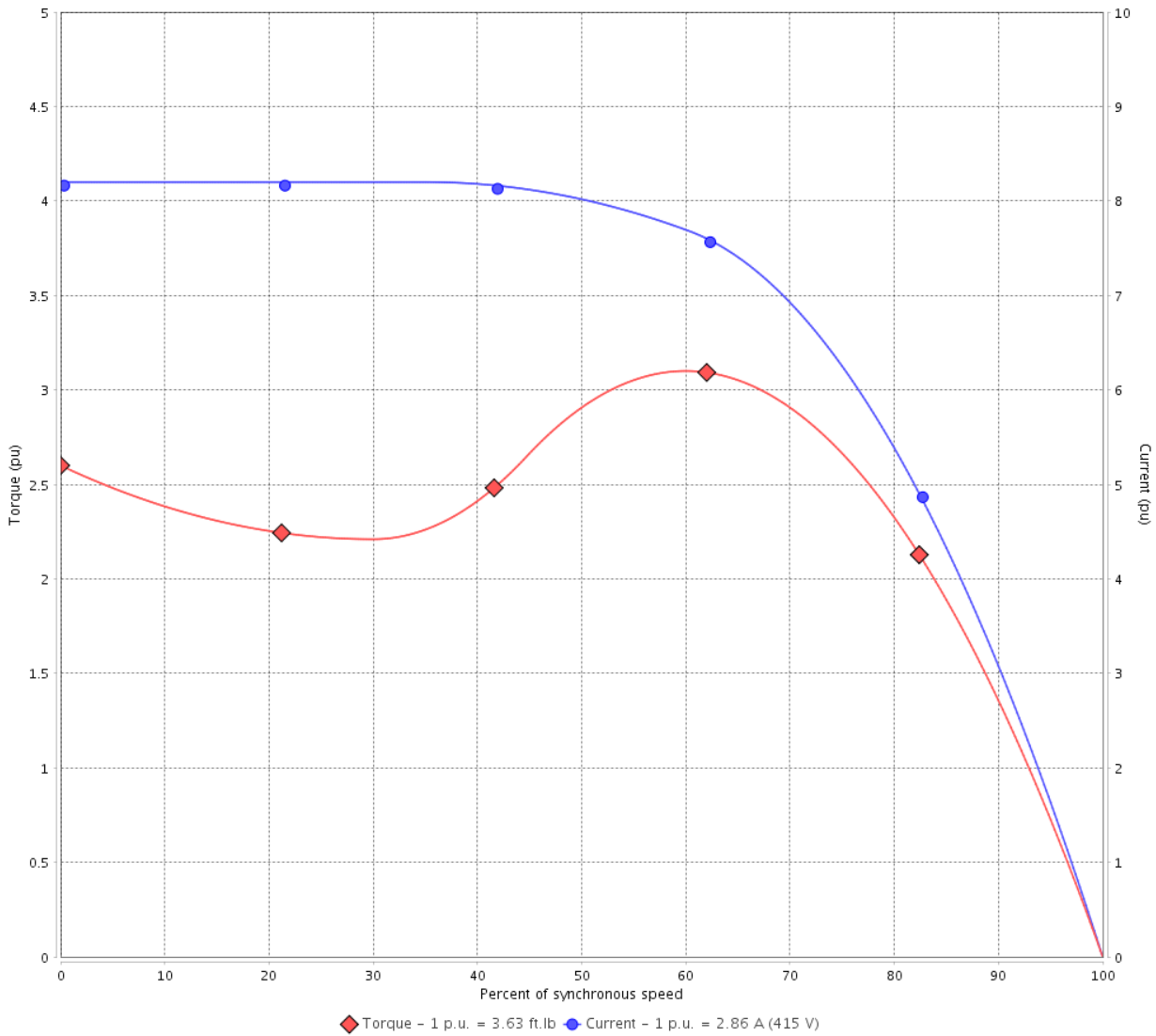
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14788838

Catalog # : 00236ET3ER145TC-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 2P

Rated current	: 5.39/2.86 A	Moment of inertia (J)	: 0.1279 sq.ft.lb
LRC	: 8.2	Duty cycle	: Cont.(S1)
Rated torque	: 3.63 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 2890 rpm	Design	: B

Locked rotor time : 0s (cold) 0s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 16	Revision
Checked by				
Date	13/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

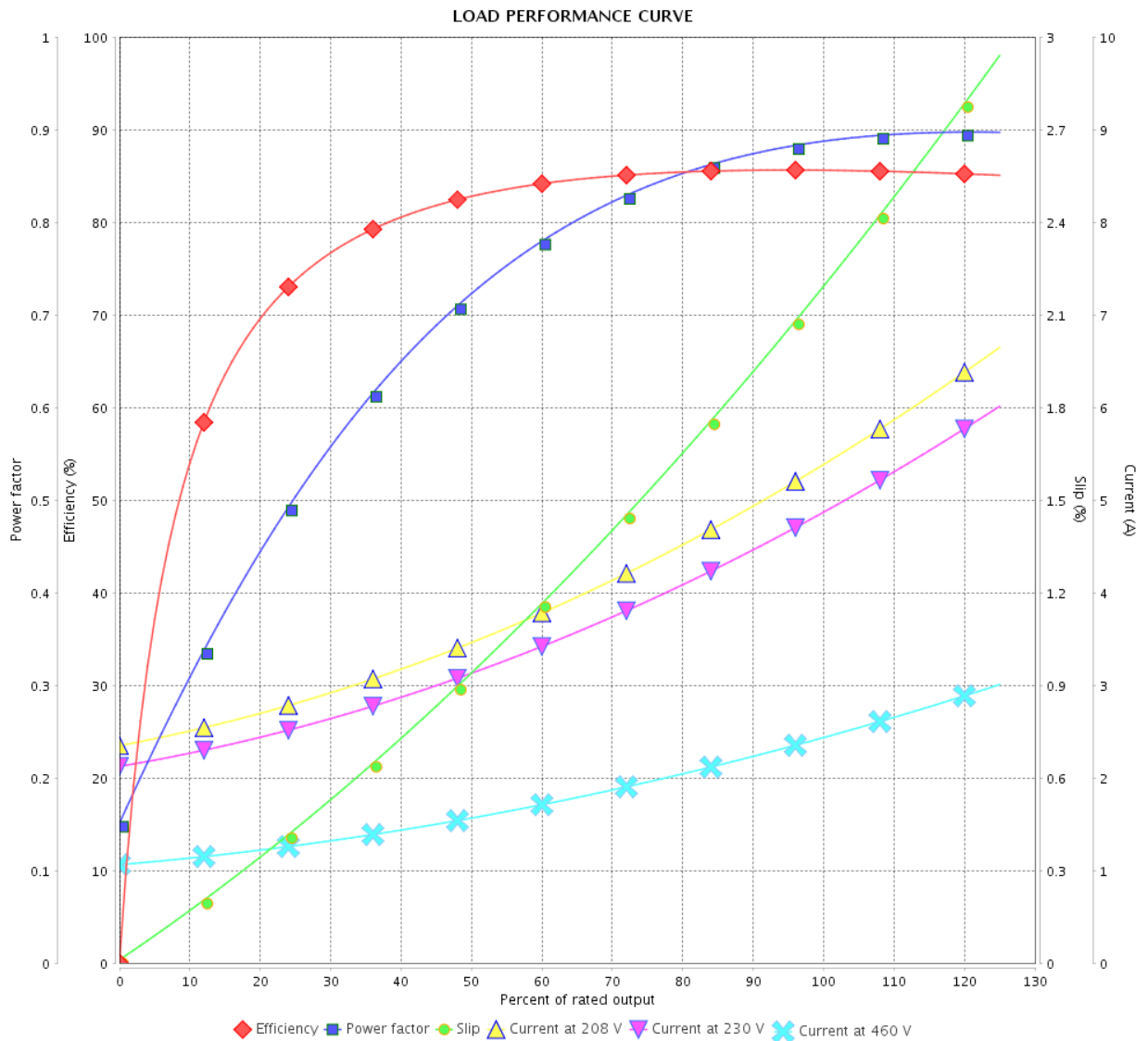


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14788838

Catalog # : 00236ET3ER145TC-S



Performance : 230/460 V 60 Hz 2P

Rated current : 4.94/2.47 A  
 LRC : 9.9  
 Rated torque : 2.98 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 300 %  
 Rated speed : 3520 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 16	Revision
Checked by				
Date	13/04/2022			

# LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



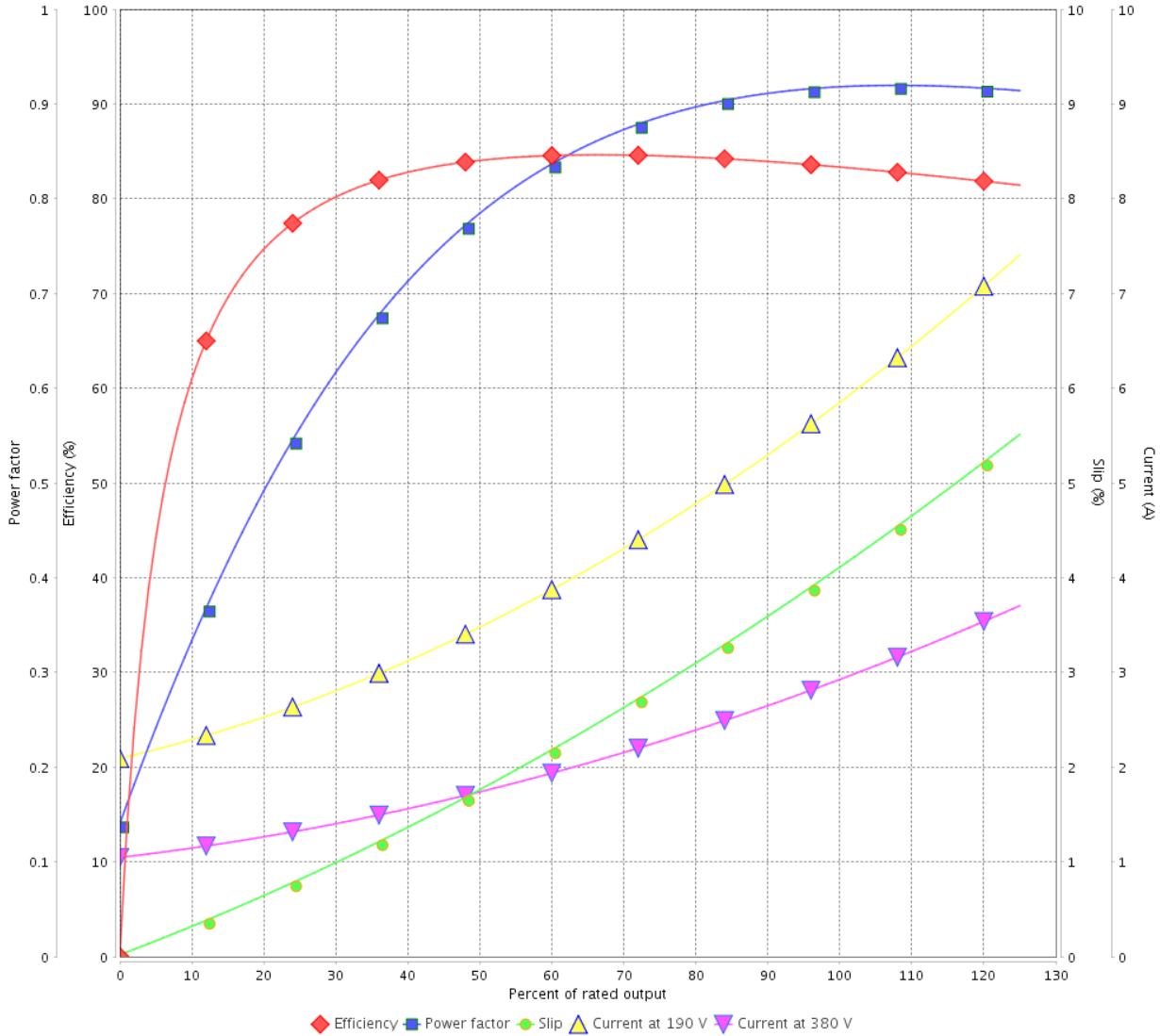
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14788838

Catalog # : 00236ET3ER145TC-S

LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 2P

Rated current : 5.94/2.97 A  
 LRC : 7.4  
 Rated torque : 3.65 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 280 %  
 Rated speed : 2875 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			6 / 16	
Date	13/04/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

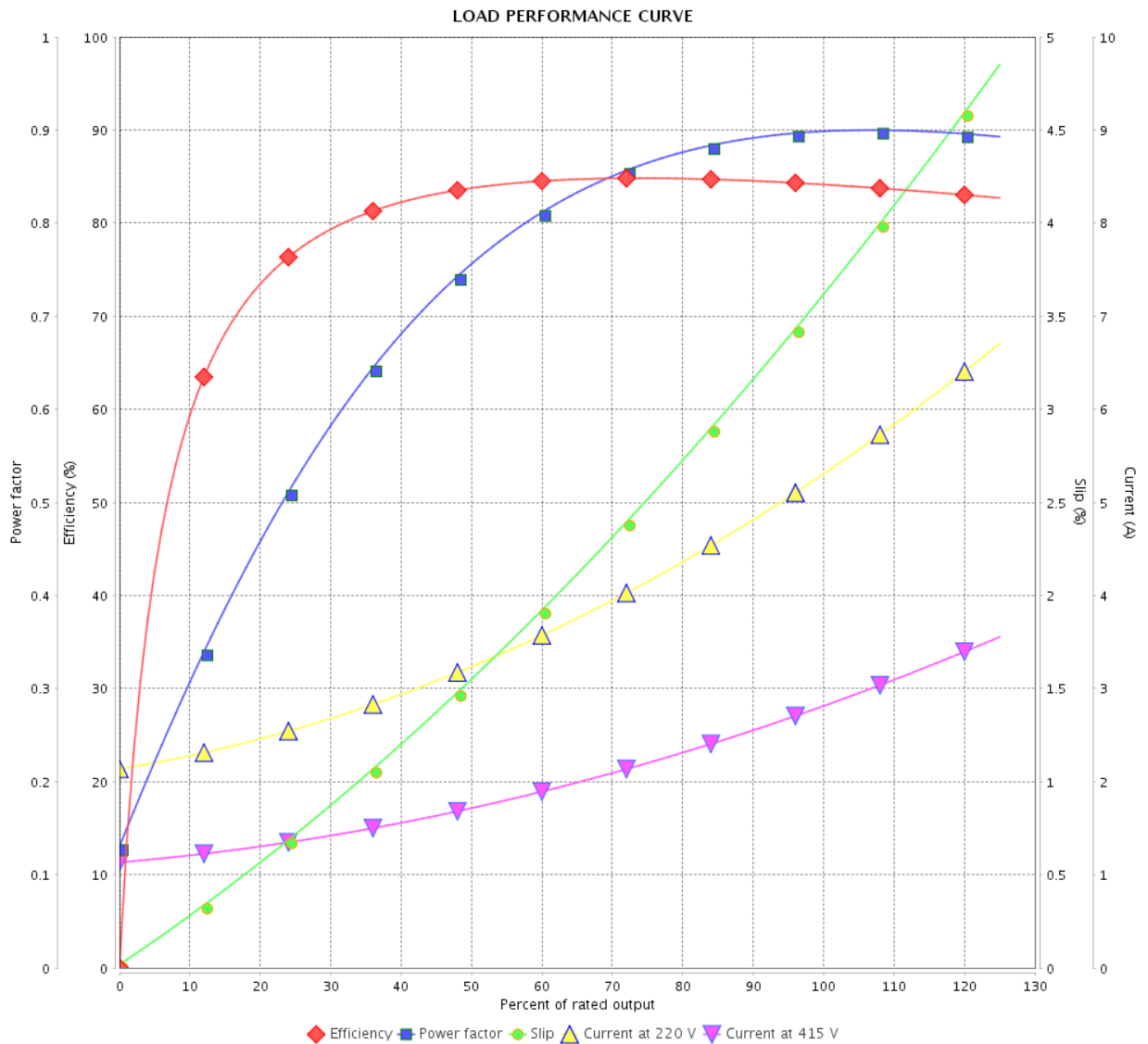


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14788838

Catalog # : 00236ET3ER145TC-S



Performance : 220/415 V 50 Hz 2P

Rated current : 5.39/2.86 A  
 LRC : 8.2  
 Rated torque : 3.63 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 310 %  
 Rated speed : 2890 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		7 / 16		
Date		13/04/2022		

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 14788838  
Catalog # : 00236ET3ER145TC-S

Performance : 230/460 V 60 Hz 2P

Rated current	: 4.94/2.47 A	Moment of inertia (J)	: 0.1279 sq.ft.lb
LRC	: 9.9	Duty cycle	: Cont.(S1)
Rated torque	: 2.98 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	:
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 3520 rpm	Design	: B

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		8 / 16	

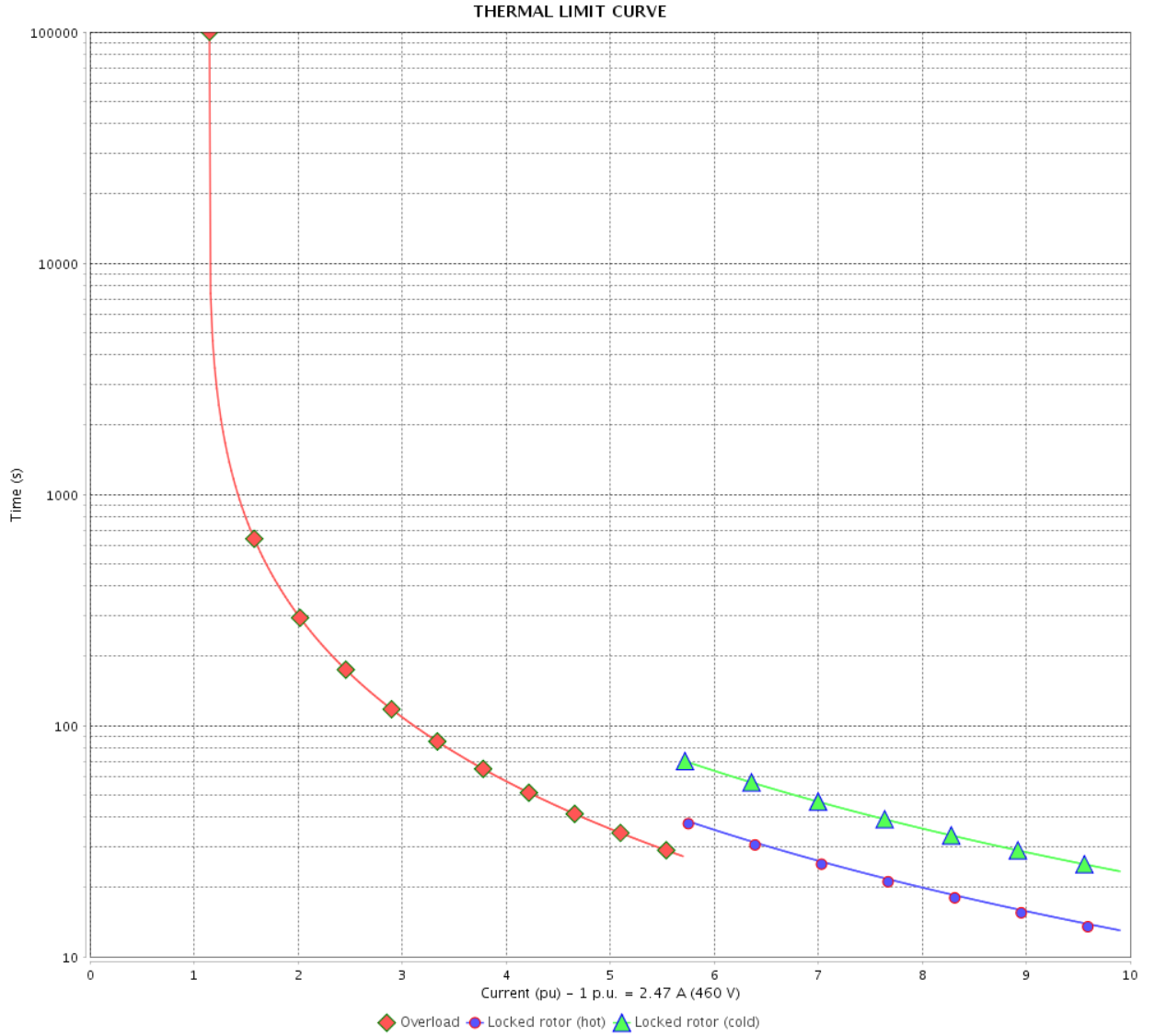


# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date				
			Page	Revision
			9 / 16	

# THERMAL LIMIT CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14788838  
 Catalog # : 00236ET3ER145TC-S

Performance : 190/380 V 50 Hz 2P

Rated current : 5.94/2.97 A	Moment of inertia (J) : 0.1279 sq.ft.lb
LRC : 7.4	Duty cycle : Cont.(S1)
Rated torque : 3.65 ft.lb	Insulation class : F
Locked rotor torque : 229 %	Service factor : 1.15
Breakdown torque : 280 %	Temperature rise : 80 K
Rated speed : 2875 rpm	Design : B

Heating constant

Cooling constant

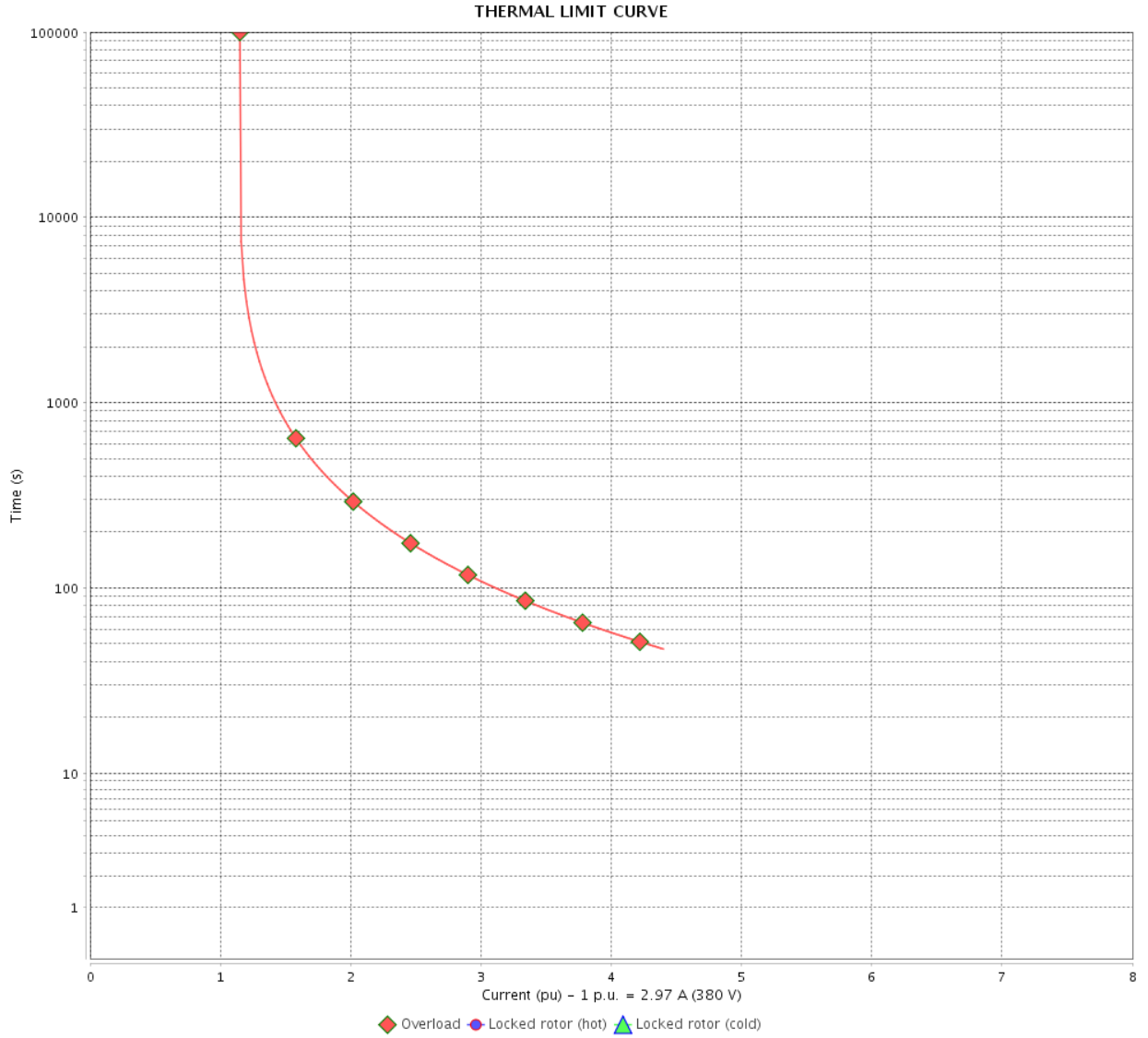
Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 10 / 16	Revision
Checked by				
Date	13/04/2022			

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page      Revision 11 / 16		
Checked by				
Date				

# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
Product code : 14788838  
Catalog # : 00236ET3ER145TC-S

Performance : 220/415 V 50 Hz 2P

Rated current	: 5.39/2.86 A	Moment of inertia (J)	: 0.1279 sq.ft.lb
LRC	: 8.2	Duty cycle	: Cont.(S1)
Rated torque	: 3.63 ft.lb	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.15
Breakdown torque	: 310 %	Temperature rise	: 80 K
Rated speed	: 2890 rpm	Design	: B

Heating constant

Cooling constant

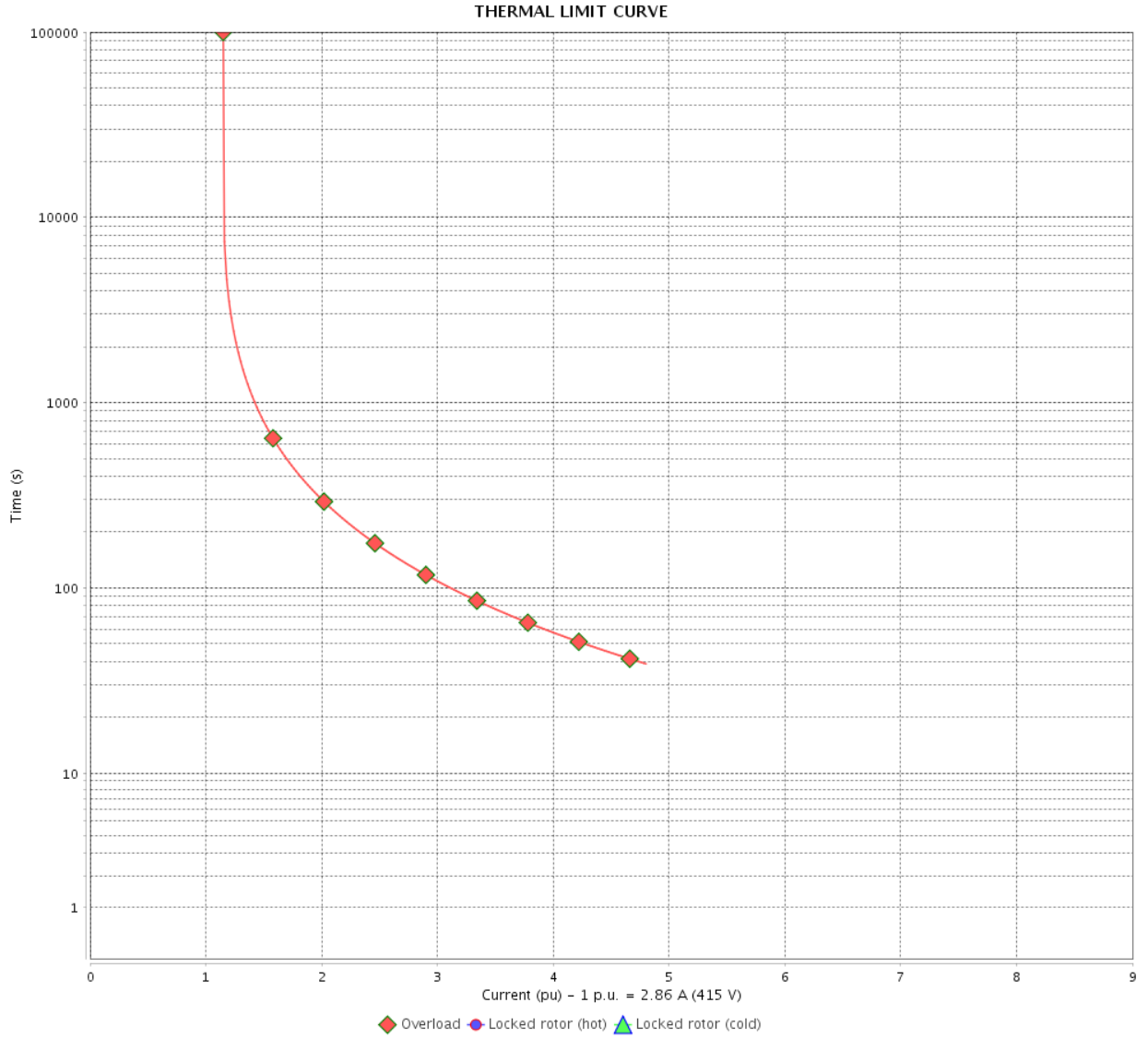
Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	13/04/2022		12 / 16	

# THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_



Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
Checked by		13 / 16		
Date		13/04/2022		

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

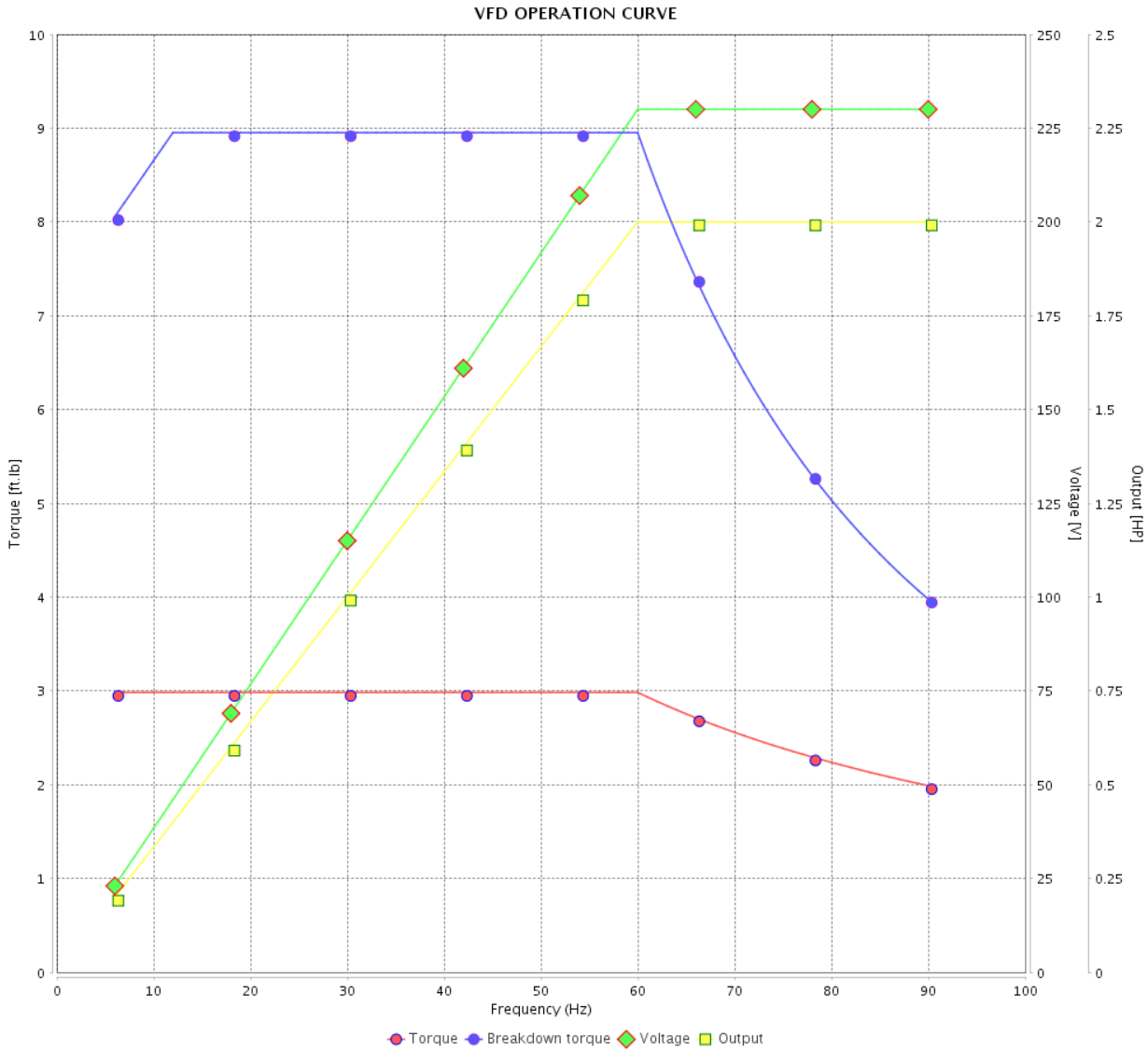


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14788838

Catalog # : 00236ET3ER145TC-S



Performance : 230/460 V 60 Hz 2P

Rated current : 4.94/2.47 A  
 LRC : 9.9  
 Rated torque : 2.98 ft.lb  
 Locked rotor torque : 250 %  
 Breakdown torque : 300 %  
 Rated speed : 3520 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 14 / 16	Revision
Checked by				
Date	13/04/2022			

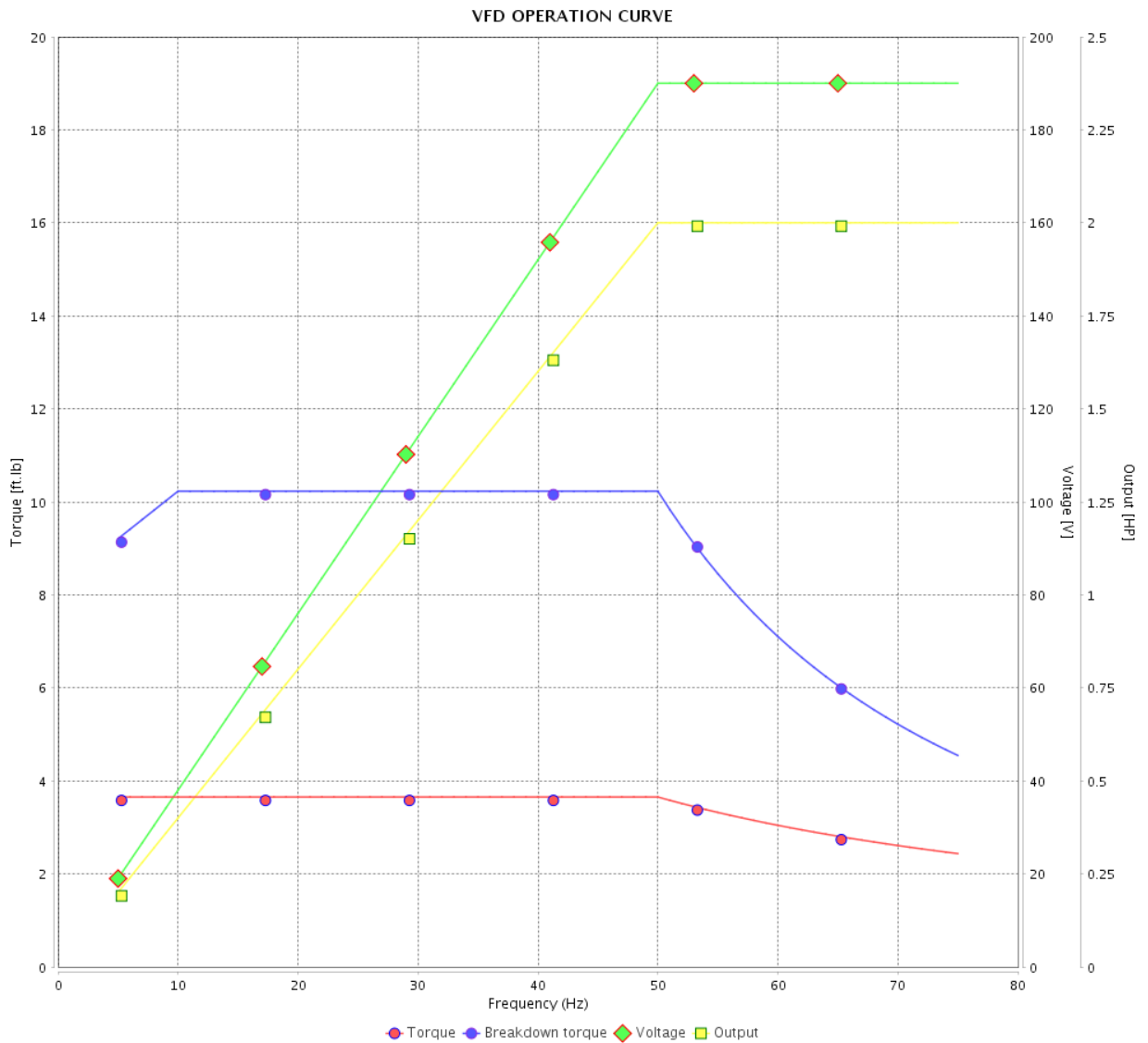
# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : NEMA Premium Efficiency Three-Phase  
 Product code : 14788838  
 Catalog # : 00236ET3ER145TC-S



Performance : 190/380 V 50 Hz 2P

Rated current : 5.94/2.97 A  
 LRC : 7.4  
 Rated torque : 3.65 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 280 %  
 Rated speed : 2875 rpm

Moment of inertia (J) : 0.1279 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by			15 / 16	
Date	13/04/2022			

# VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage



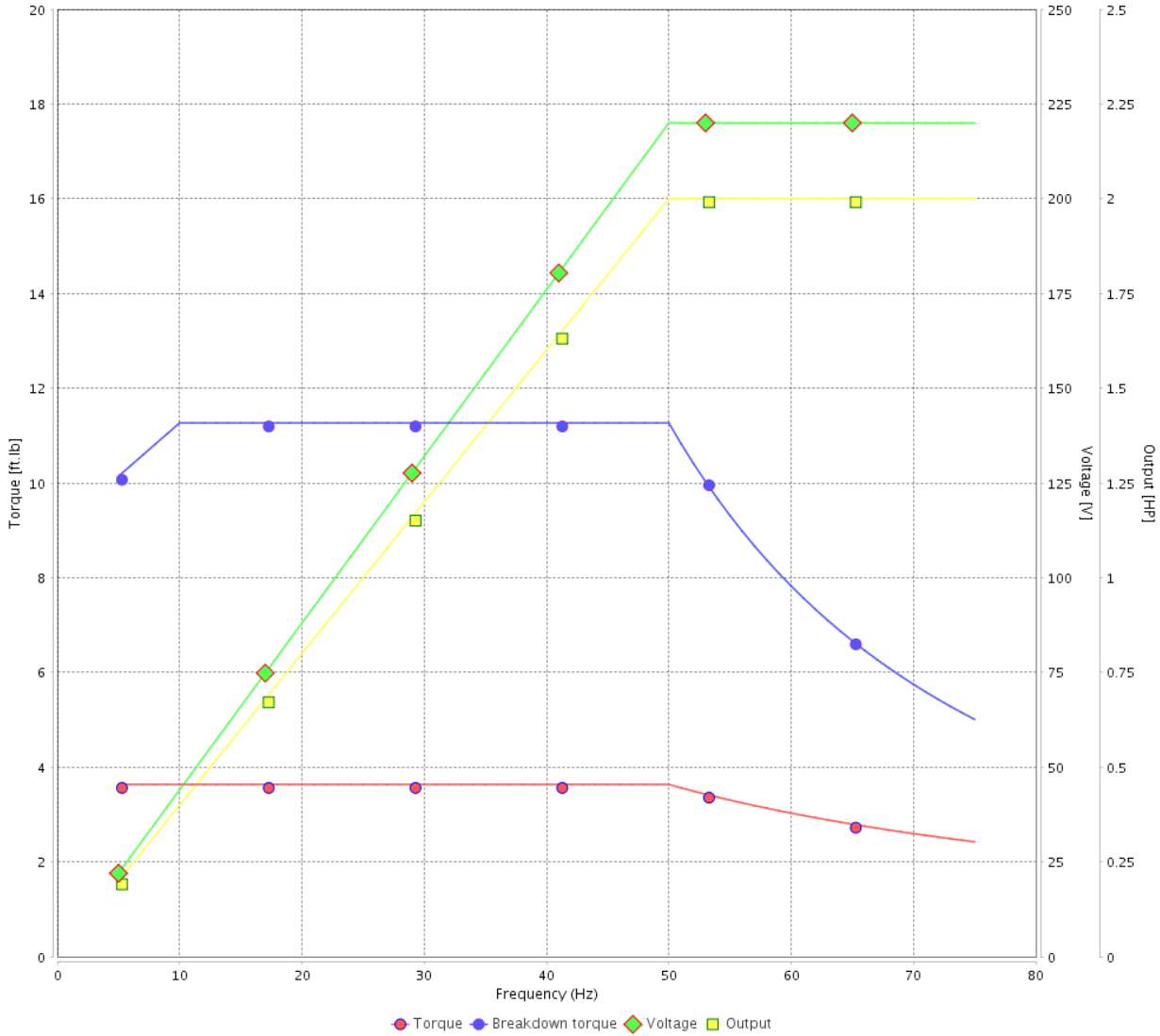
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 14788838

Catalog # : 00236ET3ER145TC-S

VFD OPERATION CURVE



Performance : 220/415 V 50 Hz 2P

Rated current : 5.39/2.86 A  
 LRC : 8.2  
 Rated torque : 3.63 ft.lb  
 Locked rotor torque : 260 %  
 Breakdown torque : 310 %  
 Rated speed : 2890 rpm

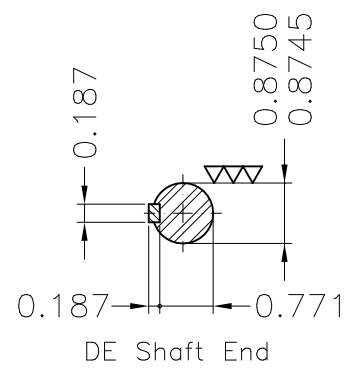
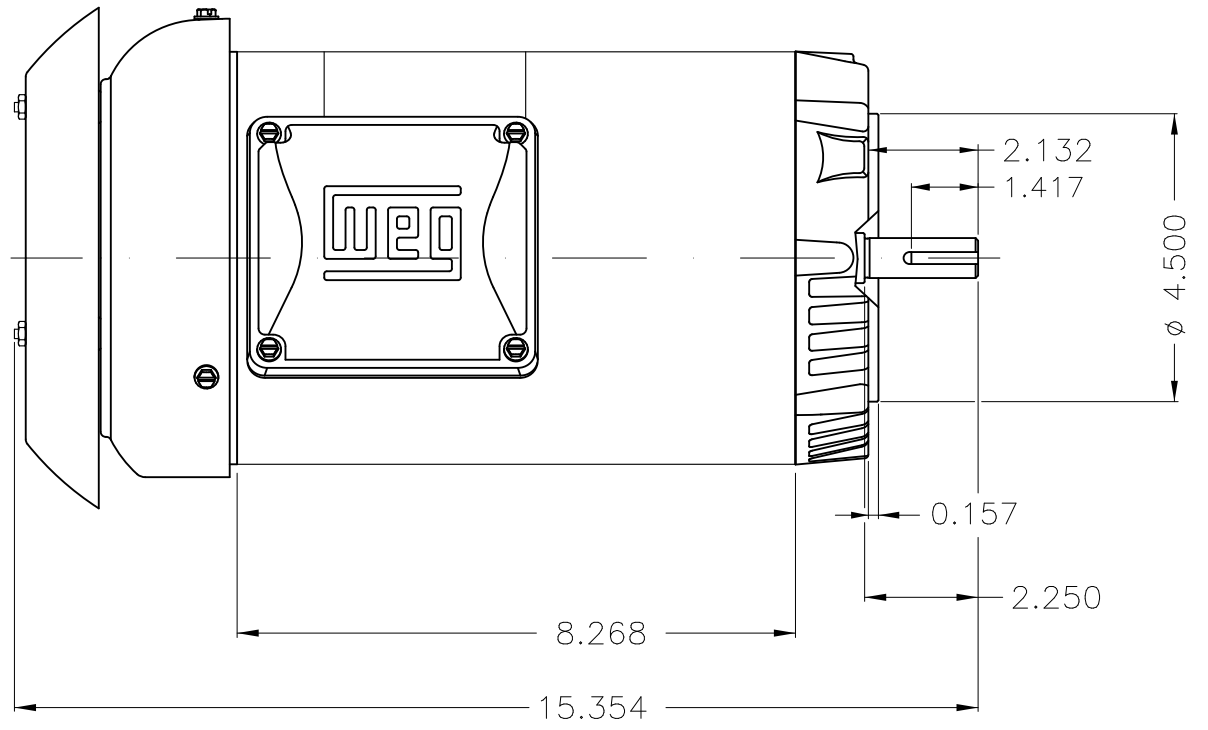
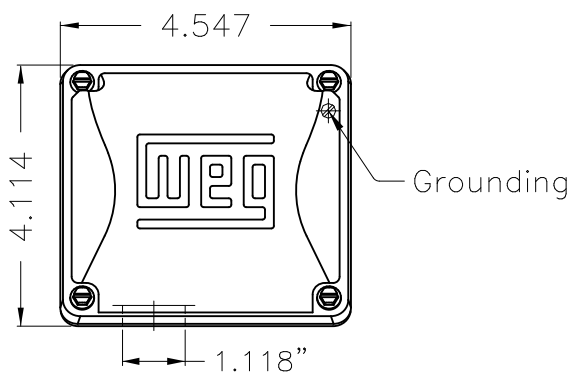
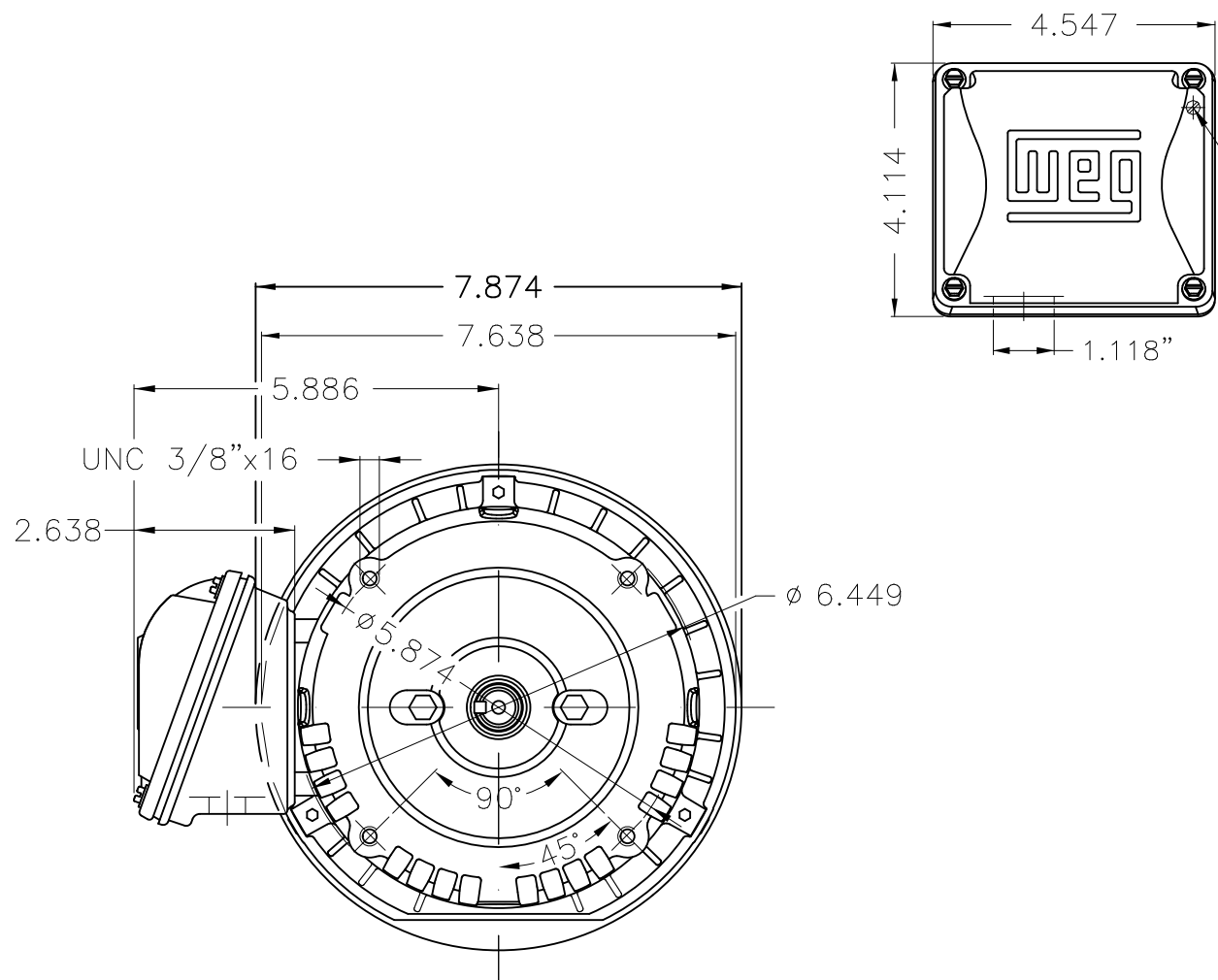
Moment of inertia (J) : 0.1279 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.15  
 Temperature rise : 80 K  
 Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date				



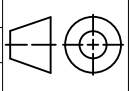
1 2 3 4 5 6

A  
B  
C  
D  
E



Dimensions in inches XME A3

Fan cover - steel plate  
 Color Munsell N 1 matte black  
 Painting plan 207N  
 Mounting W-6/V18R(D)

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	PIRWUSER	 THREE PH. MOTOR ROLLED STEEL PREM. EFF. FRAME 143/5TC IP55 TEFC					
CHECKED							
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	SHEET	1 / 1		

**PREVIEW**  
WDD



2 HP 02 Poles 60 Hz



**NEMA**  
**Premium**



MADE IN MEXICO

**MAT: 14788838 CC029A**  
**W01.TE0IC0X0N**  
**MODEL 00236ET3ER145TC-S**  
**25MAR2022 B/N:**

**For 60Hz: Class I, Zone 2, IIC**  
**Class I, Div.2, Gr. A,B,C,D - T3**  
**Div 2 Inverter Duty (SF1.00)**  
**CT 2:1/VT 1000:1**

PH 3	Hz 60	HP 2.0
FR 143/5TC		KW 1.5
DUTY CONT.		V 230/460
ALT 1000 m.a.s.l.		A 4.94/2.47
INS CL F AT 80K	IP55	SFA 5.68/2.84
AMB 40°C	DES B	SF 1.15
ENCL TEFC	CODE L	PF 0.89
USABLE @ 208V 5.46A		RPM 3520
SF1.00		NEMA NOM. EFF 85.5%

**ALTERNATE RATING: 2.0HP 50Hz 190-220/380-415V SF1.15**  
**5.94-5.23/2.97-2.77A 2875RPM EFF 83.3% (IE2) IEC 60034-1**

For safe area-Inverter duty motor For 60Hz use on VPWM 1000:1 VT, 10:1 CT

**DE 6205-ZZ ODE 6203-ZZ MOBIL POLYREX EM**



T1-BLU T2-WHT  
T3-ORG T4-YEL  
T5-BLK T6-GRY  
T7-PNK T8-RED  
T9-BRK RED

INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION

**WARNING:** Motor must be grounded in accordance with local and national electrical codes to prevent serious electrical shocks. Disconnect power source before servicing unit.



**AVERTISSEMENT:** Le moteur doit être mis à la terre conformément aux codes électriques locaux et nationaux afin d'éviter tout choc électrique grave. Déconnectez l'alimentation avant l'entretien de la machine.

